

Collection No. 197

R. H. L. Key



OLYMPIC

Central & SW. N.S.W. & NW. Victoria

GLAMIS

31. VII - 6. VIII. 1979

DUPLICATE

CARBON BOOK

(Octavo Size)

100 Leaves in Duplicate

NUMBERED

Flexiflat

THERMO-PLASTIC BOUND

Collection no. 197

31. vii - 6. viii. 1979

K. H. L. Key

Central & S.W. N.S.W.

N.W. Victoria 03

31/7

222.84.2. Cemetery. Gentle slope cleared
Monistria pustulifera, *Persea viridis* (f.?).
from *E. albens* to 60ft. Thinned with
some *Helichrysum apiculatum*. Brown
soil.

287.2. Grenfell. Took Barnedman road.

289.4. Turned right on Holy Camp road.

291.9. Stony ridge with pale brown soil.
Keyaeria marcida.

E. sideroxylon to 40ft., with occ. *E. dealbata*
+ abundant *Callitris endlicheri*. *Acacia*
sp. - to 4ft., dense *Helichrysum semi-*
papposum to 4ft., less *H. sp.* with green
foliage + large yellow flowers, *Stypandra*
to 18 in., occ. *Hibbertia* + other small
shrubs. Some grass. Leaf bitter under
eyes. *Keyaeria* associated with *Helichrysum*.

292.4. Same as 291.9, but ^{lower down,} more of green
Keyaeria marcida
Helichrysum + more grass, occ. *E. albens*

303.7. End of road at Muddie mts. Nat. Park
Keyaeria marcida

= Trip 195. stop 12457.0. Return.

320.1 Grenfell

1/8.

22320 Greenfell depart for West Wyalong

365.4 Caragabal.

389.5 Marsden.

423.6 Wyalong.

427.2 West Wyalong.

427.7 Turned left on Newell Hwy.

447.3 Allena.

448.7 Return.

470.8 West Wyalong depart.

508.1 Galgoggin.

529.3 Westhalls.

564.9 Rankins Springs.

NB. This day was cold & windy. Several stops were made at sites that had yielded *Kyapris* on earlier trips by White et al., but none could be located except one ♀ (lost). It is likely that the conditions kept them completely inactive.

2/8.

22636.9 Griffith depart for Rankins Springs

22688.9. Turn S left for Koolgowi.

695.4. Road to Griffith on left.

696.8. The Gap Dam.

697.0. Found P48 nymphs. (= 767.8)

697.2. Merungi road on right.

732.0. Koolgowi. Return.

751.1. Gentle undulations on red sand.

Keyacris sp. P108a, *Achurimima* sp. P.48 (f)

Needle-phyllode *Acacia* + broom bush, both to 8ft, *Micromyrtus* sp. to 3ft. *Helichrysum* *apiculatum* abundant to 1ft, mixed *Thysanotus mitchelliana* (Nees) S.T. Blake with a tussock grass (*Neurachne* sp. - specimen), occ. *Brachycome* sp. *Keyacris* associated with *Helichrysum* + grass.

767.5. Merungi road on left.

767.8. Western end of The Gap Dam. Up-hill

Monistria discrepans, *Phanacridium* sp. 3, side of road, where cutting for road has made steep rocky slope. Probably the

original site for P48 + certainly the site explored on last trip here. *E. dealbata* (or *Prob. Eucalyptus dwyeri* *Mais. & Beakely* ~~dwyeri~~ - spec.) to 20ft, occ. *E. populnea*, a narrow-phyllode *Acacia* to 15ft, regrowth of *Callitris hugelii* to 10ft. *Dampiera* sp.

to 2 ft in patches, *Helichrysum semipapposum* abundant to 18 in, *H. apiculatum* occ. to 1 ft, *Neurachne* (?) as at last stop & other tussock grasses to 1 ft, abundant *Cheiranthus*. P48 rather rare, as late nymphs, not noticeably associated with the ferns (probably facultative association only - perhaps for shelter ~~§~~ - see p. 14).

769.4. Road to Griffith on right.

775.8. Turned right for Griffith. At

^{Keyacris sp. P102a}
intersection: Red-brown sandy loam on low rise. *E. intertexta* to 60 ft, *Callitris hugelii* to same, *Acacia* spp. (3), including needle-phyllode one, to 15 ft, occ. *Microgynthus* to 2 ft, *Helichrysum apiculatum* dense at roadside with some grass to 9 in. *Keyacris* associated with *Helichrysum*.

795.8. Turned left.

799.1 Turned right.

808.4. Turned left (Myall Park road)

816.2 Turned left

823.4. Turned left.

826.1. Turned right.

830.4. Mt. Bungas (summit). For ecology
see Trip 195 stop 13 111.9. *Keyaria*
associated with *Helichrysum* ^{*Retam.*} *sempervivum*.

835.9. Eschene base of range, just before
flattening out to wheat. *E. populnea* to
40ft, regrowth of *Callitris hugelii* to 10ft,
Acacia sp. to 12ft, *Cassia* sp. to 6ft.

Red-brown sandy loam. Scattered *Rhagodia*
Rhagodia nutans R.Br.
sp. to 6m (spec.), a little grass. *Keyaria*
associated with *Rhagodia*.

3/8.

22871.8. Griffith, depart for Goolgowi.

923.6. Goolgowi depart for Hay.

944.0. Road to Carrathool on left.

956.4. Gumbas South.

963.3. Treeless plain with pale brown
(just past road off to right)
slightly self-mulching soil. *Keyaria* sp. ^{P1086}

vesicaria dense to 18in, with a few
Leptorhynchos pamaetoides (D.C.) Benth.
patches of *Helichrysum* sp. (spec.) to 10in,
occ. other composites, a little perennial
grass. *Keyaria* on *Leptorhynchos*
~~*Helichrysum*~~ only.

Helichrysum at -

106 - 108 = 64 ft Bal

124 = 48.0 ft Bal

140 = 32.2 ft Bal.

22966.0. Murrel Ck.

976.6. Benningrine road on right.

984.1. Road to Boobial on right.

23011.0. Flat heath grey self-mulching
Pteridroma rana, *Kapacis* sp. P1086
plain with large patch of *Helichrysum* sp.
Leptorhynchus panactioides
(as last spec.), occ. small *Atriplex* &

Bassia, abundant dead or young annual
composites & grasses. *Kapacis* on
~~*Helichrysum*~~ *Leptorhynchus*

017.8. Crossed railway (Ellilliwa).

036.1. Hwy. Took Balranello road.

059.6. Flat heath plain with pale grey
Kapacis sp. P1086
self-mulching soil. *Kochia aphylla* &
Leptorhynchus panactioides
~~*Helichrysum* sp.~~ (as last spec.) to 1 ft. with
occ. *Bassia* sp., other composites, & dead
grass. *Kapacis* abundant on ~~*Helichrysum*~~ *Leptorhynchus*

071.9. Glenhope road to left.

094.2. Road to Mountaine on left. Collecting
ceased for day.

172.2 Balranello.

NB. The section from Griffith to
Geelong is mainly *Callitris hugelii*

& *E. populnea*, very flat, on a light
 red-brown sandy loam, with a good
 grass cover. Most of it is under irrigation.
 Similar country extends some way
 from Goolgowie to where the self-
 mulching soils begin around Gumber.
 A few stops in places where there was
 some growth of *Bassias* & *Kochia*
 under mallee near Goolgowie yielded
 no *Kyasis* or other morabines. It
 seems likely that this country imposes
 a barrier between the area to the
 north & east occupied by P108a & P107/108c
 and the plains occupied by P108b.

4/8.

231/78.8. Balranald depart.

253.2. Turned left for Robinvale.

256.7. Robinvale. Took Sea Lake road.

270.6. Turned right into Murray Valley Hwy.
Keyacris sp. P141, *Crotaphytus* sp. - 1 to 20 ft.
 Rab. with red-brown sandy loam. Mallee
 with occ. *Casuarina cristata* to 30 ft.
Cassia sp. & *Acacia* sp. to 4 ft, *Olaria* sp

a *Kochia pyramidata* (?) to 2 ft. *Zygophyllum*
Vittadinia sp. (spec)
 sp., *Bassia* sp. (?) & a *Vittadinia* (scattered
 to 9 in, a little grass. *Keyacris* ^{apparently} associated
 with *Vittadinia*.

272.0. Turned right for Hattah (right fork).

327.1. Hattah. Turned south on Calder Hwy.

332.2. Return.

336.9. Hattah.

356.8. Nowingi.

373.0. Carwar.

394.9. Flat with brown soil. *Casuarina*

Cratogeomys sp. 1.
Cratata to 2 ft, with *Myoporum* sp. to 10 ft.

Cassia spp. to 4 ft, a prickly *Grevillea*.

Rhagodia sp., *Vittadinia* sp.

399.2. Inymple.

5/8.

23412.3. Buronga depart.

416.5. Gal Gal.

429.4. Monak.

438.8. Road to Parung on right.

490.7. Euston depart.

571.7. Paulmans.

584.9. Wangarah road.

604.3. Flat treeless plain with self-mulching
Kuyaeria sp. P1086
 grey soil. *Kochia aphylla* to 1ft & same
Leptorhynchos
~~*Heteropogon*~~ as before to 10 in. *Kuyaeria*
 in same association: numerous.

610.9. Road to Moulamein on right.

620.4. Flat treeless plain with grey self-
Kuyaeria sp. P1086
 mulching soil. *Nutria schobieri* & occ.
Rhagodia sp. both to 5ft, *Kochia aphylla*
Leptorhynchos
 to 2ft, & ~~*Heteropogon*~~ as before to 1ft,
 annual grass to 4 in. *Kuyaeria* in
 same association.

650.8. Road to Moulamein on right.

708.7. Hay.

6/9.

709.6. Hay depot for Darlington Point.

830.7. Darlington Point. Took road to Griffith

838.9. Flat treeless plain with brown self-
Kuyaeria sp. P1086
 mulching soil - lined by *Acacia pendula* &
Mim. E. largiflorus. *Stipa aristiglumis* to
 5ft, with patches lacking this, where
Leptorhynchos
~~*Heteropogon*~~ sp. (as before round Hay) to

to 10 in. with occ. *Bassia quinqueangula* &
 dead *Salzola Rah* & *Echium plantaginum*.
 occ. *Vittadinia*. *Kyacris* on ^{*Leptochrysochloa*} ~~*Helichrysum*~~.

843.5. Crossed railway.

866.5. Griffith. Return on Ardlethan road.

N.B. Up to 843.5 ^{*Leptochrysochloa*} ~~*Helichrysum*~~ was
 frequently seen. Thereafter the paddocks
 were intensively grazed or cropped,
 although until Hannwood the community
 was still dominated by *A. pendula*.

866.7. Griffith depart.

887.4. Road to Barry's Scenic Drive on left.

897.8. Binya.

907.5. Garoolgan.

920.4. Barclan.

930.5. Moomboldod.

937.4. = Trip 195 stop 12773.9. Road crossing
^{*Kyacris* sp. P108a}
 left & right. *Kyacris* on *Helichrysum*
sempervivum & *H. apiculatum*.

940.8. Road to Narrandera on right.

941.4. Kamarath.

954.1. Ardlethan.

956.1. Ardethan d. part.

2003.7. Young Young.

General Comments

1. The great majority of the stops yielded no grasshoppers: ecological notes for these were not made.
2. The season of the visit insured that the winter-maturing morphs would be available as adults or late nymphs, while practically no other grasshoppers were adult, & only a few species were present (in low numbers) as nymphs.
3. The weather was mostly cold & cloudy after the first (warm) day. Thus some apparent absences may have merely represented a failure ~~to~~ to flush, especially in the first half of the morning.
4. Copulating pairs were relatively frequent in *K. maculata* & P108a, but none were seen in P108b, even though

This species was relatively much the most abundant & was also more advanced, few immatures being seen.

5. Stops were made at most of the previous record sites for *Keyacris* & *P48*, including that at Nowingi.

6. I discussed subsequently with Michael White the question of the association of *P48* with *Cheilanthes*.

He said that at the time he had noted this association, the fern was almost the only green plant available, &

that he had been able to maintain the insect alive on ferns in Melbourne.

However, he was quite prepared to accept the possibility that the association might be facultative & non-obligate.